

7. (Amended) A method of tuning an active radio frequency (RF) device, the method employing tuning an impedance matching circuit coupled to the device, the matching circuit including an adjustable length transmission line, the method comprising:
- measuring a performance characteristic of the device; and
 - adjusting the length of the transmission line to adjust the measured performance characteristic.

REMARKS

The amendments to the claims add no new matter to the pending application. The amendment to claim 1 is to bring claim 1 into conformity with the language recited in independent claims 7 and 13. Amendment to claim 7 is to make explicit of what was already implicit in the claim, and therefore, neither expands or narrows the scope of the claim.

I. CLAIM REJECTIONS UNDER 35 U.S.C. § 102/103

Claims 1-4 and 6

Claims 1-4 and 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,320,462 B1 issued to Alley. Applicants respectfully note that in order to sustain a rejection under §102, each element in the rejected claim must be found, either expressly or inherently, in the cited reference.

Amended claim 1 recites a transmission line for electrically coupling a radio frequency signal between a source and a load comprising the active device, wherein the length of the transmission line is adjusted based on a measured performance characteristic of the device. Alley does not disclose or suggest such a limitation. Rather, Alley discloses a transmission line 96b having an input

end coupled to an amplification device 84a (a source) and an output end coupled to an output terminal 80b. (Column 8, line 1 to Column 9, line 27, and Figure 5). Signals transmitted from an input terminal 80a to the amplification device are processed, and then fed to the transmission line. Although Alley discloses adjusting the transmission line to change the output signal of the source (the amplification device), there is nothing in Alley that discloses or suggests adjusting the length of the transmission line based on a measured performance characteristic of *a load* to which the transmission line is coupled. Even if it is inherent that a load is connected to the output terminal 80b, as the Office Action suggests, there is nothing in Alley that discloses or suggests adjusting the length of the transmission line based on a measured performance characteristic of that load. As such, claim 1 is allowable over Alley. For at least the same reason that claim 1 is allowable, claims 2-6, which depend from claim 1, are also allowable over Alley.

Claims 7-10, 12-14, and 16-18

Claims 7-10, 12-14, and 16-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,992,752 issued to Cioffi. Claim 7 recites adjusting the length of the transmission line to adjust the measured performance characteristic of a device. Similarly, claim 13 recites adjusting the length of the transmission line to achieve a change in the measured performance characteristic of an active device. Cioffi does not disclose or suggest such an element. Rather, Cioffi describes a device having a transmission line, which has a length that is *pre-determined* (i.e., by empirical calculation) for maximum signal gain and minimum return loss. In particular, the length of the transmission line is adjusted before a performance characteristic of the device is measured. (Column 9, line 23 to Column 10, line 8). Because Cioffi does not disclose or suggest adjusting the length of the transmission line based on a measured performance characteristic of an

active device, claims 7 and 13 are allowable over Cioffi. For at least the same reason that claims 7 and 13 are allowable, claims 8-12, which depend from claim 7, and claims 14-18, which depend from claim 13, are also allowable over Cioffi.


CONCLUSION

Based on the foregoing, all claims are now allowable and a Notice of Allowance is respectfully requested. If the Examiner has any questions or comments regarding this amendment, the Examiner is respectfully requested to contact the undersigned at the number listed below.

Respectfully submitted,

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Enclosure: Marked up version of the amended claims pursuant to 37 C.F.R. § 1.121(c)(1)(ii).

Marked up version of the amended claims pursuant to 37 C.F.R. § 1.121(c)(1)(ii).

1. (Amended) An impedance matching circuit for tuning an active device, comprising:
a transmission line for electrically coupling a radio frequency signal between a source and a load[, one of the source and load] comprising the active device, wherein the length of the transmission line is adjusted [to achieve a selected]based on a measured performance characteristic of the device.

7. (Amended) A method of tuning an active radio frequency (RF) device, the method employing tuning an impedance matching circuit coupled to the device, the matching circuit including an adjustable length transmission line, the method comprising:
measuring a performance characteristic of the device; and
adjusting the length of the transmission line to adjust the measured performance characteristic.